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Decreasing Environmental Inequity Through the Development of Safe and Healthy Housing in Lewiston-Auburn, Maine A Document Prepared for the Green and Healthy Homes Initiative By Grace Kenney, Tenzin Namdol, Kate Paladin, and Sarah Mae Silverberg Community-Engaged Research in Environmental Studies (ENVR 417) Bates College

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Executive Summary

The Industrial Revolution and successful mill industry in Lewiston, Maine led to a population boom in the 19th century. In response to a sudden housing demand, Lewiston-Auburn residences were built quickly and without regard to long-term use, and today many of these houses still stand in poor condition. The current inhabitants of these degraded housing units are disproportionately low-income, ethnic minorities, disabled, elderly, and immigrants. Housing hazards such as uneven floors, fires, allergens, moisture and fungi, pests, and air pollutants are abundant. The high likelihood of lead-based paints present in these homes makes lead poisoning an issue of particular concern for housing health in the Lewiston-Auburn community. Exposure to even the smallest amounts of lead can cause irreversible damage to human body systems. As total lead poisoning rates are declining nationally, they have become more concentrated in low-income, minority children, especially those living in old houses. Lead poisoning rates in Lewiston-Auburn are three times the state average.

While there are many organizations in the Lewiston-Auburn area working to increase the quality of housing, reduce health hazards, and provide equitable services to residents, only this year has an organization been created to coordinate all of these efforts in order to create efficient and effective change in the community. The Green and Healthy Homes Initiative (GHHI) is a national coalition that aims to "break the link between unhealthy housing and unhealthy children, families and seniors," by serving as a liaison between a variety of funding resources, health care providers, community and governmental programs, and homeowners and residents (GHHI 2014). The Lewiston-Auburn GHHI chapter, founded in June 2014, intends to create safe and healthy homes with an emphasis on lead hazard reduction and lead abatement. GHHI Lewiston-Auburn allows homeowners to access all of Maine's resources for home improvement, including adding weatherization and energy efficiency retrofits, reducing slip and fall hazards, and eliminating contaminants such as lead and mold, all coordinated by one organization.

As GHHI Lewiston-Auburn is a new chapter as of 2014, they are still developing the framework necessary to work with community partners, residents, and the wider community of Lewiston-Auburn effectively. With the help of other GHHI chapters and a variety of local resources, partnerships with other organizations were created in order to foster information exchange between residents and GHHI professionals, as well as streamline the application process for homeowners who are seeking rehabilitation. In order to begin creating a solid foundation of resources for GHHI Lewiston-Auburn, a database of potential community partners and resources for residents was created. This serves as reference for both GHHI Lewiston-Auburn and residents who may be searching for funding or assistance programs within the community. Formerly four housing rehabilitation applications were used to find candidates for financial aid. These documents were combined into one comprehensive housing application, creating a system that can be used by multiple community partners and a larger majority of residents. A one page document was created to provide information about GHHI and to advertise the benefits of partnering with GHHI to organizations with missions related to housing and health in the state of Maine. A second document was developed in order to effectively communicate vital health hazard prevention methods and tips on how to keep a healthy home to low-literacy and non-native English speaking residents. The housing assessment surveys used by the GHHI resident educator to gather a general picture of the health of a home and its residents were re-written to simplify the process and eliminate redundant, leading, and unclear questions.

Next steps in continuing to lay the framework for GHHI Lewiston-Auburn includes the creation of a portable version of the housing asset database for the GHHI's home educator to take to home visits and to be used as a resource for planning team committee members, and in the long term a partnership with GHHI Providence, Rhode Island, to create a wikiHousing page as an online database which would be an expansion of the textual document that should be made in the next few months. Because the income distribution in City of Lewiston and the City of Auburn varies, the next step in the housing rehabilitation application is to create two different sliding fee scales, one for each city. In order for GHHI to fully to attain the goals articulated in its mission, expanding community wide awareness is the key. GHHI should focus their efforts in recruiting family physicians, social workers and educators, in their search to acquire well-established, committed partners within the community who can serve as liaisons for information to the community.

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Introduction

The emergence of the Industrial Revolution not only brought about growth in the manufacturing sector, but also led to the migration of millions of Americans from rural areas into cramped cities in search of job opportunities. As populations increased in tightly packed urban neighborhoods, living conditions and housing standards began to deteriorate from overuse. Millions of people lived in overcrowded, poorly ventilated, damp, and unclean homes with limited access to clean water and waste disposal systems. These poor living conditions allowed notorious diseases such as cholera, tuberculosis, diarrhea, and whooping cough to thrive and affect the lives of the working population (Hernberg et al. 2000; Shaw 2004).

In the 1840s, the Industrial Revolution reached Lewiston-Auburn. The population more than doubled due to the expansion of the Lewiston mill industry. Inherent in this population increase was the need for rapid and cheap housing construction (Leamon 1976). The Lewiston-Auburn rental housing stock is a result of the booming mill industry (Planning Decisions, Inc. 2013). While the housing projects met an immediate need, the buildings were not suitable for long-term use. Of the houses that exist in Lewiston-Auburn today, 77.2% were built before 1980 (U.S. Census 2010-2012). This explains the current degraded housing conditions.

Many of the residents currently living in these degraded spaces are disproportionately low-income, ethnic minorities, disabled, elderly and immigrants. Children are especially susceptible to health outcomes brought upon by lack of quality housing (Gasana et al. 2006). It is essential to understand the linkages between socioeconomic inequality, health, and home environments prior to rehabilitation (Srinivasan et al. 2003). Reducing the risk of housing hazards such as lead, uneven floors, fires, allergens, moisture and fungi, pests, air pollution, and pesticides will improve the health and well-being of vulnerable populations. (Matte and Jacobs 2000). It is important to understand that many housing hazards are interrelated. Excess moisture and structural leakages, for example, contribute to fungal growth, peeling paint, and structural damage that can allow pests to enter homes (Matte and Jacobs 2000).

Lead poisoning is of particular concern for housing health in the Lewiston-Auburn community. Exposure to even the smallest amounts of lead can cause severe nerve, endocrine, and renal health problems. Prolonged lead exposure can cause irreversible symptoms as wide ranging as mental retardation, growth disorders, attention deficit-hyperactivity disorder, and at high exposure levels, death. Inaction towards lead exposure compromises overall quality of life. Overall IQ decreases as a result of lead poisoning; each drop in IQ point equates to an estimated loss of $17,815 in lifetime earnings. Assuming this, a dollar invested in lead hazard control could result in a return of $17–$221 (Gould 2009).

Children with blood lead levels are highly likely to be African American, live in congested cities, be from a low income background, and have a lower education level (Gasana et al. 2006). Although US childhood blood lead levels have dropped 80% since the introduction of laws restricting its use in the late 1970s and early 1980s, children living in pre-1978 buildings have not seen a significant decrease in blood lead levels. While the total incident rates decline, incidents have become more concentrated among low-income, minority children living in poor housing conditions (Cummins 2001). In Maine, 79% of residences were built pre-1978 and more than 242,000 housing units have been identified as high risk for lead exposure (Littell 2002). It is

therefore not surprising that lead poisoning rates in Lewiston-Auburn are three times the state average (Maine Tracking Network 2013).

From 2008-2012, 2.2% of Lewiston-Auburn children screened had blood lead levels above the CDC lead poisoning level of 10 µg/dL. Since 2012, the CDC changed the definition of lead poisoning to 5µg/dL indicating the incidence rate is likely much higher under new standards (Maine Tracking Network 2013). Despite high rates of poisoning, Maine still has some of the lowest screening levels in New England and the country (Little 2002). Although the Maine CDC has suggested protocols, no statewide requirements regarding whom to test for lead poisoning exist. It is likely that an insubstantial number of high-risk children are being screened and it is therefore possible that Maine's lead poisoning rates are artificially low. Although Maine has some residential lead-safe renovation programs, funding is limited and most middle-income families do not qualify for assistance (*Ibid.*).

One of the most promising methods to reduce environmental and health inequalities in Lewiston-Auburn is to focus on increasing community awareness of home-based environmental health hazards, such as lead poisoning (Bashir 2002). Historically, health education has focused on lifestyle choices and changing individual behaviors. However, this model ignores the complex associations between environmental, social, structural, and physical factors such as housing, sanitation, minority status, and toxin exposure with morbidity and mortality. Because of simplistic assumptions about health education methods, past interventions have left victims trying to solve problems too large to be addressed by an individual (Israel et al. 1994). Unfortunately these previous failures have contributed to present ignorance about the use of education in contemporary health promotion (Nutbeam 2006).

After an increased awareness about home health hazards has been achieved, residents need to be given tangible methods to solve issues on an individual basis. For example, alerting residents to the negative health effects of tobacco smoke in the home may not produce positive results unless the options for reduced health risk such as smoking outdoors or closing off a separate space for smoking are offered (Bashir 2002). Not only can secondhand smoke inhalation be hazardous to occupants, especially children, but third hand smoke, a term recently coined to describe the settling of cigarette toxicants onto surfaces in the home of a smoker, is also of concern as toxins can linger in dust for up to three months (Burton, 2011). Additionally, effective health education is proactive and requires educators to empower individuals so that they can participate in social change (Israel et al. 1994). This empowerment may be better defined as health promotion, which improves an individual's power over all modifiable determinants of health including public policy and living and work conditions.

Health literacy is critical to empowerment as it improves people's access to health information and their capacity to use it effectively, including something as simple as the ability to be able to read health education pamphlets (Nutbeam 2006). Thus, empowerment should be treated as both a process and an outcome. The feeling of powerlessness is linked to mental and physical health status, and social support has proven to enhance health outcomes. It is recommended that health professionals, researchers, and community members collaborate in participatory action research to express concern and create a method of research combining social participation, collaboration, action, and reflection on issues significant to co-researchers.

A health educator can then use this framework to intervene in community identified health problems (Israel et al. 1994).

The Green and Healthy Homes Initiative (GHHI) is a coalition that functions to bring together community actors such as health care professionals, housing associations, researchers, and community members in order to create a collaborative solution to unhealthy housing (GHHI 2014). It finds affordable solutions to improve home health by serving as a liaison between a variety of funding resources, health care providers, community and governmental programs and homeowners and residents. A healthy home is one that is well maintained in order to reduce slip and fall hazards and eliminate contaminants such as lead and mold. This can be achieved by keeping the home dry, clean, ventilated and pest-free. Additional goals include fire safety and adding weatherization and energy efficiency retrofits.

The Lewiston-Auburn GHHI chapter's goal is to create safe and healthy homes with an emphasis on lead hazards and safe lead removal strategies, as these are issues of particular concern in the region. GHHI plays an important role in resident and landlord education. Because many Lewiston-Auburn residents, many of whom are recent immigrants from places like Somalia or central Africa, have low-literacy levels and/or are learning English as an additional language, barriers exist in home safety and lead education. In order to bridge this gap, a GHHI resident educator visits all referred clients and helps guide them through all processes, forms, and behavioral changes that the program endorses.

Because of the language, literacy, and educational barriers, GHHI dedicate extra effort to reach their target audience. This includes looking to further connections with community partners representing hospitals, personal physicians, housing agencies, and government officials, in order to reach more of the community. Creating educational materials that are accessible to illiterate residents or to those with a limited reading level is a high priority, as is distributing them to those in the community to which they are relevant. Taking into consideration the inherent difficulties in communicating the importance and availability of resources for a safe and healthy home, GHHI is determined to create equitable access to information and resources for the residents of Lewiston-Auburn.

Methodological Approaches

In the dual role of students and community volunteers, the intersection between community work and academic theory was addressed. Building upon pre-existing research done by the GHHI planning committee, Brown University, and GHHI Providence, collaborating among team members and the community network, evenly distributing work between team members, and enforcing early and consistent deadlines were essential methods to produce each of the five deliverables.

Housing Asset Database. The housing asset database provides valuable information on programs currently available to the community and highlights the strengths of each and what types of services still need to be developed. The GHHI Rhode Island housing system map provided the inspiration for compiling a list of relevant organizations that facilitate awareness, provide funding, have stakes in housing, assist with rehabilitation, and perform outreach. The original document was difficult to read and provided less than adequate information, and therefore was used only loosely as a guide for the Lewiston-Auburn housing asset database. Existing lists of organizations, group member's own local knowledge and research created the framework for a database. Data on each organization's contact information, mission statement, and available services were added. GHHI planning team members reviewed the research, providing organization suggestions and additional feedback.

Housing Rehabilitation Application. The housing rehabilitation applications allow homeowners to apply for consultation and funding to renovate their buildings. Four original applications were edited to properly address the target audience, eliminate redundancies, and remove inapplicable sections. Originally Lewiston and Auburn each had their own set of applications—one for single-family homes and one for multi-family complexes. The sheer number of pages, difficult terminology, and complex tables complicated the application documents. In recognizing the limitations of the rehabilitation applications, group members met with city representatives Jayne Jochem and Reine Mynahan in order to create one comprehensive application for both Lewiston and Auburn's single-and multi-family homeowners with a supplementary document for multi-family residence landlord regarding additional tenant information.

One Pager. A one-page informational document serving as a promotional pamphlet for the relatively new GHHI Lewiston-Auburn chapter informs the community about GHHI and the services it provides. This document was written before Lewiston-Auburn became an affiliated GHHI chapter, and therefore changes were necessary to reflect the new status of the organization, to update statistical out-of-date information, and to include information on the status of housing health in Lewiston-Auburn. Preliminary research was conducted on the current status of housing hazards in the United States, in Maine, and in the cities of Lewiston and Auburn. Sources for the original information and new sources were found to verify, update, and supplement the existing document, including adding information about Auburn which was previously not included. The information was reorganized and graphically designed using Microsoft Publisher to ensure a professional and organized document that can be immediately used by GHHI Lewiston-Auburn.

Tip Sheet. GHHI headquarters provided the Lewiston-Auburn chapter with a wealth of lead tip sheets; however, the information was not accessible for a low-literacy audience. A new tip sheet was written at or below an 8th grade reading level. In order to compile this new sheet, the text was run through an electronic 8th grade reading level checker, additional visual aids were added, and the document was reformatted to ensure legibility.

Home Assessment Surveys. The GHHI national headquarters provided GHHI Lewiston-Auburn with a collection of three housing assessment surveys —"Energy and Weatherization Behavior Survey," "Health and Safety Behavior Survey," and "Health and Safety Pre-Survey." The surveys are intended for the resident educator in order to to better understand the behaviors, housing concerns, and health situation of each family visited. However, some questions were poorly written, contained redundancies, asked leading questions or were above an 8th grade reading level. Group members evaluated questions and brainstormed potential alternatives before meeting with Bates professor of sociology, Emily Kane, for additional guidance on the best way to re-write the questions.

Results and Discussion

Housing Asset Database. The GHHI resident educator utilizes the Housing Asset Database to assist residents in choosing organizations and/or resources offered in the community that best meet their needs. Additionally, it will help others working on GHHI identify current and possible community partners who can be contacted to help fund GHHI, spread awareness and/or provide services to residents. Research for the housing asset database is stored in a spreadsheet which includes the organization name, the mission statement, the relevant services, and contact information. The categories, each on their own sheet, were taken from the original Rhode Island housing system map. They include awareness, funding (direct use and organizational use), housing agencies, rehabilitation programs, and outreach. Each section is further divided into subcategories to further organize the information stored on institutions and agencies.

A hypothetical resident would navigate through organizations as they are represented horizontally on the chart. For example, if an elderly resident was looking for a home care service to help with installations to reduce falls, they may turn to the outreach category and look at health care options (Figure 1). With the help of the resident educator, the client would be able to use the mission statement and the services provided to decide which would be the most applicable and beneficial option. This information could lead to the identification of a service such as Androscoggin Home Care & Hospice. Using the contact information provided, the individual can contact the provider independently or with the help of GHHI depending on their comfort level
and abilities.

Type	Name	Short Description	Relevant Services	Contacts	Phone
Health Care	Androscoggin Home Care and Hospice	A community based home care and hospice agency serving the counties of Androscoggin, Franklin, Oxford, N. Cumberland, Kennebec and parts of Sagadohoc and Somerset.	Androscoggin Home Care & Hospice provides skilled home care services including chronic care, diabetes care & education, high-risk falls prevention, Infusion Therapy, Obstetrical, Maternal & Pediatric Care, Oncology Services, Rehabilitation and Orthopedic Services.	Julie Shackley	777-7740
Health Care	Common Ties	Common Ties promotes the health and wellness of the citizens of Androscoggin County supporting recovery from the combined challenges of physical, mental, and substance abuse illnesses.	Community Integration and Medication Management, Community & Housing Resources, Wellness & Recovery Center and Crisis Services.	Karen Bate-Pelletier	795-6710

Figure 1. Two sample health care organizations, both of which are listed under the awareness and outreach categories of the housing asset database for GHHI Lewiston-Auburn.

Housing Rehabilitation Application. GHHI Lewiston-Auburn is the first GHHI multi-city chapter. Providing services to two cities creates additional coordination and logistical challenges which are addressed by merging the four original Housing Rehabilitation Applications from Lewiston and Auburn. The revised document better addresses the target audience, eliminates redundancies, and removes inapplicable sections (Figure 2). This is one of the first steps taken by GHHI to link the housing rehabilitation processes between Lewiston and Auburn.

The housing application will be available to the community through meetings held by the two cities and GHHI. The new format should is more clear and efficient for homeowners to complete and makes it simper for Lewiston and Auburn City Halls to process the documents (Figure 3).

MONTHLY INCOME: Check yes or no for each type of income. Enter the amount of all money that household members have received for the past 30 days, or money that you expected to receive. Provide a copy of your most recent check stub or benefit statement with this application.

Source of Income	Yes	No	Money Received by Applicant	Other Household Members
Employment			$	$
Temporary Assistance to Needy Families			$	$
Social Security			$	$
Military/Veterans Benefits			$	$
Retirement or Pension Plan			$	$
Unemployment Benefits			$	$
Worker's Compensation			$	$
Child Support/Alimony			$	$
SSI/Supplemental Security			$	$
Interest/Dividends Income			$	$
Earned Income Credit			$	$
Other			$	$

Figure 2. The original housing rehabilitation application had sections that were unclear or misleading, and had information that was either unnecessary or missing. For example, in the monthly income section of the application, the yes/no section increased the likelihood that a resident could omit important employment and financial information.

MONTHLY INCOME:

Enter all income that household members have received for the past 30 days. Provide copies of recent check stubs or any benefit statement with this application.

Source of Income	Applicant	Co-Applicant	Other Household Member over 18 years of age	Other Household Member over 18 years of age
Employment	$	$	$	$
Social Security	$	$	$	$
Military/Veterans Benefits	$	$	$	$
Retirement or Pension Plan	$	$	$	$
Unemployment Benefits	$	$	$	$
Worker's Compensation	$	$	$	$
Child Support/Alimony	$	$	$	$
SSI/Supplemental Security	$	$	$	$
Interest/Dividends Income	$	$	$	$
TANF/Temp. Assist. for Needy Families	$	$	$	$
Food Stamps	$	$	$	$
State Income Tax Refunds	$	$	$	$
Other	$	$	$	$

Figure 3. In the revised housing rehabilitation application, these unclear components were altered to account for co-applicants and gave an option for other household members over the age of 18 to report their income. Additionally, the 'Source of Income' section was modified to include additional sources.

One Pager: The one pager effectively communicates to potential GHHI community partners the GHHI mission and what can be accomplished in the Lewiston-Auburn community with their help. It is one of the only documents GHHI Lewiston-Auburn has to reach out to potential partners and expand the community of professionals dedicated to moving the mission forward. Because the original one pager was written before GHHI Lewiston-Auburn became an affiliated chapter, the creation of an updated document reflects the new status of the organization. It also functions to include recent national and local information on housing health (Figure 4).

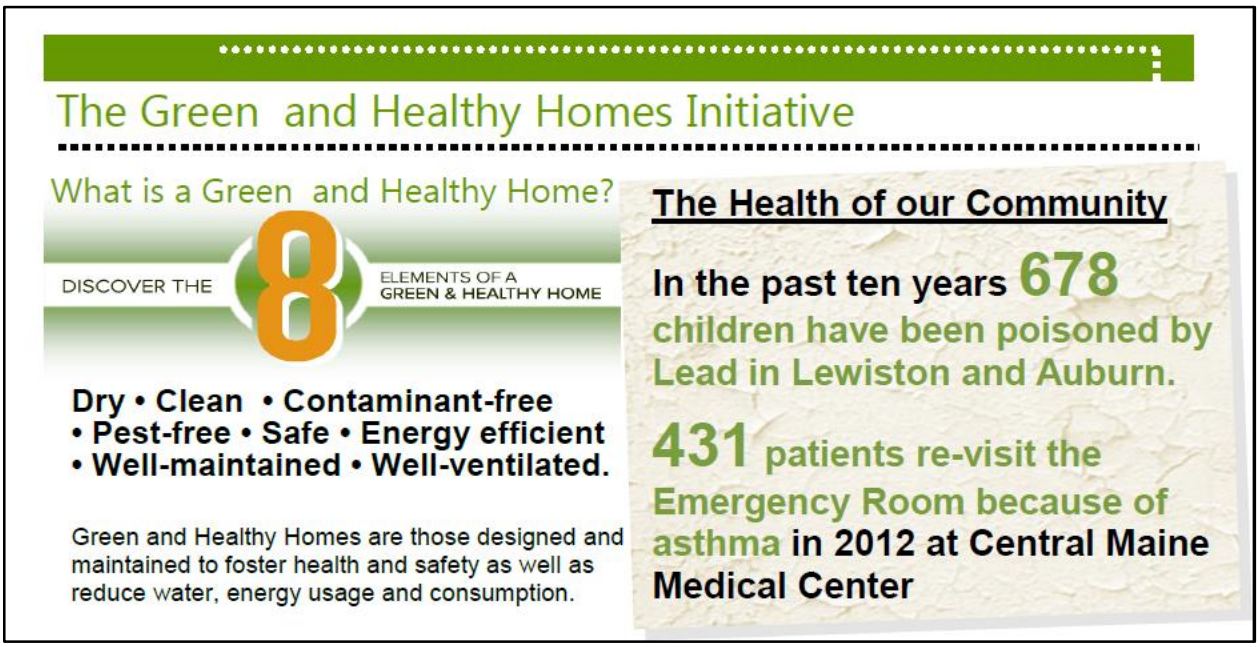


Figure 4. The updated GHHI promotional one page document outlines the goals of GHHI and problems specific to the Lewiston-Auburn community.

Tip Sheet. The tip sheet explains the dangers of lead at a reading level appropriate for a general audience, including those whose first language is not English or whose literacy level is low (Figure 6). GHHI's current tip sheets have lengthy sentences and vocabulary that may not be familiar to their intended community audience (Figure 5). One example of this overly complex language is:

> Lead poisoning affects an estimated 535,000 children younger than 6 annually in the United States. Lead is a home health and safety hazard that can harm your child's brain, causing lifelong learning and behavior problems...When lead dust is ingested or inhaled, even in miniscule amounts, it can cause significant and irreversible brain damage as well as other health problems. Lead dust equivalent of only three granules of sugar can begin to poison a child (Burton 2011).

Language at such a high reading level is less likely to be read or understood by residents and therefore can only be conveyed to residents verbally by the GHHI resident educator.

The new tip sheet is an important tool for GHHI because it is a document that more people in the community can understand and learn from. To ensure that this new tip sheet will be readable and comprehensible by most everyone in the community, it was written at or below an eighth grade reading level. Images are included to ensure that the information is presented appropriately for all community members. Providing information to everyone regardless of education level or proficiency for English begins to eliminate environmental inequity in the Lewiston-Auburn community.

Lead and a Healthy Diet

What You Can Do to Protect Your Child

Lead's Effects on the Body

Lead is a poisonous metal that our bodies cannot use. Lead poisoning can cause learning, hearing, and behavioral problems, and can harm your child's brain, kidneys, and other organs. Lead in the body stops good minerals such as iron and calcium from working right. Some of these effects may be permanent.

Lead Awareness and Your Child

Children with lead poisoning usually do not look or act sick. The only way to know if your child has lead poisoning is by getting a blood test. Ask your doctor or health care provider to test your child under six years of age at least once a year.

Lead Hazards

Where is Lead Found?

Main Sources of Lead

Lead-based paint is a hazard if it is peeling, chipping, chalking, or cracking. Even lead-based paint that appears to be undisturbed can be a problem if it is on surfaces that children chew or that get a lot of wear and tear. The older your home is, the more likely it is to contain lead-based paint.

Contaminated dust forms when lead paint is dry-scraped or sanded. Dust can also become contaminated when painted surfaces bump or rub together. Lead chips and dust can gather on surfaces and objects that people touch or that children put into their mouths.

Lead poisoning occurs **without** any **obvious symptoms** and **harms** your child's body.

Contaminated soil occurs when exterior lead-based paint from houses, buildings, or other structures flakes or peels and gets into the soil. Soil near roadways may also be contaminated from past use of leaded gasoline in cars. Avoid these areas when planting vegetable gardens.

Other Sources of Lead

Contaminated drinking water from older plumbing fixtures

Lead-based painted toys and household furniture

Imported lead-glazed pottery and leaded crystal

Lead smelters

Hobbies

Folk remedies like azarcon and pay-loo-ah

Cosmetics like kohl and kajal

Do not store **food** in glazed pottery **from foreign countries.**

Figure 5. A pre-existing lead tip sheet. In addition to containing too much text, the language is also too complex for many of the community members in the intended audience.

Figure 6. The new lead tip sheet has less text and is written at or below an eighth grade reading level. It provides necessary information such as "It can make you sick" without complicating simple concepts.

Home Assessment Surveys. The home assessment surveys are intended for the resident educator to better understand the behaviors, housing concerns, and health situation of GHHI clients. However, some surveys contained redundancies, asked leading questions, and were hard for residents to understand. For example, the old Energy and Weatherization survey had some questions with non-mutually exclusive answers. When residents were asked about the temperature of their home, "Hot" and "Comfortable" could both be accurate responses for a resident who prefers a hot home temperature. In the updated question, emphasis is placed on the temperature relative to the resident's preferences (Figure 7). Leading questions, or a question phrased in such a way that answer is implied in the question, were a major concern in the original surveys. For example, when residents were asked about the status of their child's asthma, "out of control" and "poorly controlled" asthma were some of the possible answers. This type of wording is leading because parents are unlikely to admit that they cannot control their child's medical condition. However, in this particular question, after consulting with a Registered Nurse who confirmed this is the correct medical terminology and could not suggest other appropriate terminology, the phrasing was left in the modified survey version (Figure 8).

The surveys help determine what work GHHI can accomplish with each family and in each home, including which services will be most beneficial. They also inform the resident educator of the resident or homeowner's awareness of health and energy usage behaviors and issues relevant within the home.

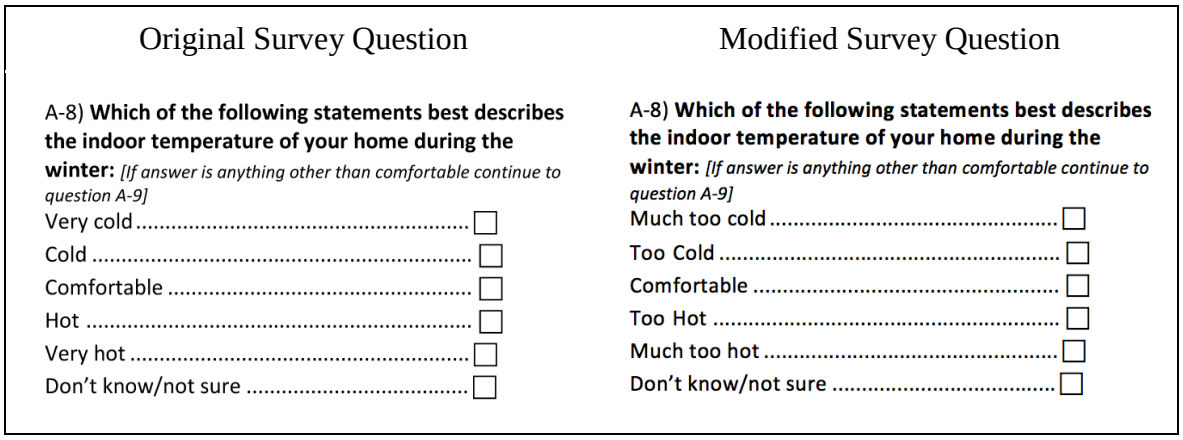


Figure 7. Samples from the original (left) and modified (right) home assessment surveys.

CHILD 2 – Asthma History
(skip to question B30 if not more than 1 child has asthma)

B14) Child 2 Age: _____

B15) How would you rate the child's asthma during the past 12 months?
☐Out of control ☐Poorly controlled ☐Somewhat controlled
☐Well controlled ☐ I don't know

B16) Number of urgent care/clinic visits for asthma in the past 12 months: _____

B17) Number of ER visits for asthma in the past 12 months: _____

B18) Child 2: Number of asthma-related hospitalizations in the past 12 months (not just ER visits): _____

B19) Child 2: Number of times in the past month that child has used the rescue inhaler or nebulizer (if one has been prescribed): _____

B20) Child 2: Number of nights in the past month that child was up in the middle of the night as a result of asthma symptoms (wheezing, coughing, shortness of breath): _____

B21) Child 2: Number of missed days of school/daycare in the past 12 months due to asthma: _____

CHILD 2 – Asthma History
(skip to question B30 if not more than 1 child has asthma)

B14) Child 2 Age: _____

B15) How would you rate the child's asthma during the past 12 months?
☐Out of control ☐Poorly controlled ☐Somewhat controlled
☐Well controlled ☐ I don't know

B16) Number of nights in the past month that child was up in the middle of the night as a result of asthma symptoms (wheezing, coughing, shortness of breath): _____

B17) Number of missed days of school/daycare in the past 12 months due to asthma: _____

B18) Number of times in the past month that child has used the rescue inhaler or nebulizer (if one has been prescribed): _____

B19) Number of urgent care/clinic visits for asthma in the past 12 months: _____
B20) Number of asthma-related hospitalizations in the past 12 months (not just ER visits): _____
B21) Number of ER visits for asthma in the past 12 months: _____

Figure 8. An original set of questions from the Pre-Health Assessment Survey compared to the modified set. Some questions were rearranged such that the survey began with the most minor asthma related incidents. For example, it was important to ask questions like how many nights a child stayed awake due to asthma before enquiring about the number of ER visits in the past month.

Outcomes and Implications

The documents created help to address the environmental justice concerns within the local community. Ethnic minorities, the elderly, people with disabilities, children, and residents from low socioeconomic backgrounds are the most vulnerable to environmental home health hazards (Gasana et al. 2006). These populations are also the most likely to live in insufficiently maintained or overcrowded homes and least likely to have access to resources that help improve the health of their home (Fullilove and Fullilove 2000; Srinivasan et al 2003). It is important to provide these vulnerable populations with awareness of the issue as well as access to resources such as those offered by governmental institutions, community action agencies, and health care providers. GHHI recognizes that there is a disconnect between the people who need resources and those who can provide them. It seeks to bridge this gap by serving as an educator and liaison for the community. In order for GHHI to provide home health information to residents and homeowners, if they must participate in in-person verbal transactions as well as distribute an assortment of educational literature.

Documents were created with the goal of educating and empowering the vulnerable populations living in Lewiston-Auburn. Through educating members of the Lewiston-Auburn community about the importance of a healthy living environment and the factors that contribute to a safer home, residents will ideally recognize that the places where they live and work have a clear impact on their health (Srinivasan et al 2003). Knowledge of these issues is unhelpful to the community without also providing resources and practical solutions. GHHI ensures that all individuals have the potential to improve their home, by serving as a guide through the vast number of local resources. Knowledge about home health hazards and how to affordably prevent or improve them needs to be put into the hands of those directly affected by home health inequity.

The issues in Lewiston reflect greater environmental injustices throughout the country, and even globally. There are a disproportionate number of low-income, ethnic minorities, disabled peoples, elderly, and immigrants whose health is affected by low quality housing (Gasana et al. 2006). Pilot and demonstration projects that engage community members in identifying priorities and implementing interventions improve health and quality of life (Miller et al. 2011). As programs like GHHI expand throughout the United States, the hope is to increase awareness among vulnerable populations and decrease inequities across the nation.

Next Steps

Although the one pager, tip sheet, and home assessment surveys have been updated and are ready for GHHI to distribute and use in future home visits, there is still much to be done. Currently, all those working for GHHI serve in positions at other institutions as their primary form of empoyment. Given the time constraints this presents, certain future steps should be prioritized. These include completing the housing asset database, incorporating a sliding fee scale into the housing rehabilitation application process, promoting awareness of safe and healthy homes and GHHI's services, and expanding the focus of the Lewiston-Auburn chapter beyond health hazards such as lead.

The housing asset database should be converted into a housing asset map. Future work should determine the most effective method to communicate the information included in the database to the general public, potential community partners and funders and the larger GHHI network. We propose both short term and long term methods to best display this information. In the short term, a physical, transportable document including graphic and detailed textual components should be created. First, a simplified map, using Rhode Island's map as a model, should be designed, displaying how a home owner or resident would move through different categories of organizations to achieve a healthy home. Following this visual should be a breakdown of each category with specific information about each organization's' mission, services and contact information. This portable document will be helpful for the GHHI's home educator to take to home visits and can be a resource for planning team committee members. At this stage Jeremy Wortzel, a Brown University student who partnered with GHHI Providence on the Rhode Island asset map, could provide consultation of longer term goals. GHHI Providence is working on a wikiHousing page set to release next year. After they lay the foundation, GHHI Lewiston-Auburn should create a similar online database, which would be an expansion of the projected textual document. This will make information even more available for the general public. The online format will make the entire set of information user friendly, it will be easier to follow the flow across the asset map, and there will also be less pressure to put all information on one page.

A sliding fee scale needs to be created to accompany the housing rehabilitation application. Because the income distribution in the City of Lewiston and the City of Auburn varies, it is most likely that two different sliding fee scales will be needed. The gap in information between the funders and the homeowners seeking funding must be reduced through education and training. Therefore, the Cities of Lewiston and Auburn should hold informational sessions for landlords who may qualify for a housing rehabilitation process to explain how to fill out the application.

In order to attain the GHHI's housing health goals, community wide awareness needs to be increased. Currently GHHI Lewiston-Auburn is working to acquire well-established, committed partners within the community and should focus their efforts in recruiting family physicians, social workers, and educators. Such individuals link the information GHHI provides, such as tip sheets, with their intended community audience. Not only do these partners pass on knowledge about effective and often simple behavioral changes, but they can also connect

identified individuals with programs that GHHI sponsors in order to provide additional assistance in improving their home's health and safety. These community partners should be provided with educational materials which may require the further development of other tip sheets, and promotional materials about programs GHHI can provide to increase the health and efficiency of individual's homes.

The national GHHI organization identifies 8 elements that make up a green and healthy home. So far, however, the Lewiston-Auburn chapter has focused most of their efforts on a subset of these elements. When GHHI Lewiston-Auburn acquires an outcome broker, the organization should consider expanding their focus to issues such as weatherization and energy efficiency. An easy first step would be to look into providing multiple services at the same time, like installing more efficient windows when windows with painted frames are removed for lead abatement. In some cases, it can also make sense to remove a house's siding (US Department of Housing and Urban Development, 2012), opening the opportunity to add certain wall insulation. Simultaneously improving efficiency improvements can provide the resident with long term savings by reducing utility bills spending spending additional money on home improvements later on.

As GHHI Lewiston-Auburn continues to grow, including the acquisition of an outcome broker, Bates students should stay involved in the organization's work. There is currently interest within the Bates student community to work on some of these next steps and foster the connection between GHHI, affiliated organizations, and the college.

References Cited

Bashir, Samiya A. "Home is where the harm is: inadequate housing as a public health crisis." *American Journal of Public Health* 92, no. 5 (2002): 733-738.

Brulle, Robert J., and David N. Pellow. "Environmental justice: human health and environmental inequalities." *Annual Review of Public Health* 27 (2006): 103-124.

Burton, Adrian. "Does the smoke ever really clear? Thirdhand smoke exposure raises new concerns." *Environ Health Perspect* 119, no. 2 (2011): A70-74.

Cummins, Susan Kay, and Richard Joseph Jackson. "The built environment and children's health." *Pediatric Clinics of North America* 48, no. 5 (2001): 1241-1252.

Fullilove, MT., and Fullilove, RE. "What's housing got to do with it?" *American Journal of Public Health* 90 (2000): 183 – 184.

Gasana, Janvier, WayWay Hlaing, Kristy Siegel, Armando Chamorro, and Theophile Niyonsenga. "Blood Lead Levels in Children and Environmental Lead Contamination in Miami Inner City, Florida." *International Journal of Environmental Research and Public Health* 3, no. 3 (2006): 228-34.

Glanz, Karen, Barbara K. Rimer and K. Viswanath. *Health Behavior and Education: Theory, Research and Practice*. 23-40, San Francisco, CA: Jossey-Boss, 2008.

Gould, Elise. "Childhood lead poisoning: conservative estimates of the social and economic benefits of lead hazard control." *Environmental Health Perspect* 117, no. 7 (2009): 1162-1167.

Green and Healthy Homes Initiative (GHHI) . "What is GHHI?." (2014) Accessed 2014 at <http://www.greenandhealthyhomes.org/about-us/what-ghhi>.

Hernberg, Sven. "Lead Poisoning in a Historical Perspective." *American Journal of Industrial Medicine* 38, no. 3 (2000): 244-254.

Israel, Barbara A., Barry, Checkoway, Amy Schulz and Marc Zimmerman. "Health Education and Community Empowerment: Conceptualizing and Measuring Perceptions of Individual, Organizational and Community Control" *Health Education Quarterly* 21, no 2 (1994): 149-170.

Jacobs, David E., Robert P. Clickner, Joey Y. Zhou, Susan M. Viet, David A. Marker, John W. Rogers, Darryl C. Zeldin, Pamela Broene, and Warren Friedman. "The prevalence of lead-based paint hazards in US housing."*Environmental Health Perspectives*, no. 10 (2002): 599-606.

Jacobs, Michael, and Gelvin Stevenson. "Health and housing: a historical examination of alternative perspectives." *International Journal of Health Services* 11, no. 1 (1981): 105-122.

Kraft, Michael E., and Denise Scheberle. "Environmental justice and the allocation of risk: the case of lead and public health." *Policy Studies Journal* 23, no. 1 (1995): 113-122.

Lawrence, Roderick J. "Housing and health: from interdisciplinary principles to transdisciplinary research and practice." *Futures* 36, no. 4 (2004): 487-502.

Leamon, James. "Historic Lewiston: A Textile City in Transition" *Lewiston Historic Commission* (1976): 8. <http://www.lewistonmaine.gov/DocumentView.aspx?DID=1191>.

Littell, David. "Why More Is Required to Address Maine's Childhood Lead-Poisoning Problem." *Maine Policy Review* 11, no 2 (2002): 116-129.

Maine Tracking Network. "Lead Poisoning Data." *Maine Center for Disease Control* (2013) Accessed September 19, 2014. <https://data.mainepublichealth.gov/tracking/lead-content>.

Matte, Thomas D., and David E. Jacobs. "Housing and health-current issues and implications for research and programs." *Journal of Urban Health* 77, no. 1 (2000): 7-25.

Miller et al. "Healthy homes and communities putting the pieces together." *American Journal of Preventative Medicine* 40 no. 1 (2011): S48-S57.

Nutbeam, Don. "Health Literacy as a public health goal: A challenge for contemporary health education and communication strategies in the 2st century." *Health Promotion International*, 15 no. 3 (2006): 259-267.

Planning Decisions, Inc. "Analysis of the Impediments to Fair Housing Choice." (2013). <http://www.auburnmaine.gov/CMSContent/CDBG/Final_Document_Analysis_of_Impediments_to_Fair_Housing_2013_Auburn_2.pdf>.

Sargent, James D., Mary Jean Brown, Jean L. Freeman, Adrian Bailey, David Goodman, and Daniel H. Freeman Jr. "Childhood lead poisoning in Massachusetts communities: its association with sociodemographic and housing characteristics." *American Journal of Public Health* 85, no. 4 (1995): 528-534.

Shaw, Mary. "Housing and Public Health" *Annual Review of Public Health* 25 (2003): 397-418.

Srinivasan, Shobha, Liam R. O'Fallon, and Allen Dearry. "Creating healthy communities, healthy homes, healthy people: initiating a research agenda on the built environment and public health." *American journal of public health* 93, no. 9 (2003): 1446-1450.

Symanski-Sanders. "Caring for Patients with Limited English Proficiency." *NursingCredits.* (2004). Accessed October 8, 2014.

Thomson, Hilary, Mark Petticrew, and David Morrison. "Health effects of housing improvement: systematic review of intervention studies." *British Medical Journal* 323, no. 7306 (2001): 187-190.

Appendices

Appendix A: Housing Rehabilitation Application
Appendix B: One Pager
Appendix C: Tip Sheet
Appendix D: Home Assessment Surveys

OFFICE USE ONLY
Date Received: _____

LEWISTON/AUBURN REHABILITATION PROGRAM COMPREHENSIVE APPLICATION CHECKLIST

Fill out and sign the loan application completely and return with all required documentation to:

Auburn Community Development Department
2nd Floor, Auburn Hall
60 Court Street
Auburn, Maine
Telephone (207) 333-6601 ext. 1334

OR

Lewiston Economic and Community Development Department
Lewiston City Hall
27 Pine Street
Lewiston, Maine
Telephone: (207) 513-3000 ext. 3233

Required Documentation

☐ **Verification of Income:**
_____ Most recent complete income tax return (if you file)
_____ Two months pay stubs
_____ Annual benefit statements
_____ Two months recent bank statements

☐ **List of Assets with Market Values**

☐ **Mortgage:**
Provide a recent mortgage statement or copy of your promissory note

☐ **Homeowner's Insurance:**
Provide current proof of Homeowner's Insurance

REHABILITATION PROGRAM
City of Auburn, Community Development
60 Court Street, Auburn, ME 04210 Telephone 333-6601

Edited 12/9/14

Applicant's Name _____ Date of Birth_____
Co-applicant's Name _____ Date of Birth _____

Applicant's Social Security # _____Co-applicant's Social Security # _____

Mailing Address _____

Email Address _____

Phone: Home _____Work _____ Cell _____

Number of people living in household _____ Number of bedrooms located in the home _____

Please provide additional information:

Name	**Relationship**	**Age**

RACE: The Community Development Program reports certain information to the federal government. Please provide the race and ethnicity of the head of household (check one box):

___ White
___ Black/African American
___ Asian
___ American Indian/Alaskan Native
___ Native Hawaiian/Other Pacific Islander
___ Black/African American & White
___ Asian & White
___ Other Multi Racial
___ Amer. Indian/Alaskan Native & White

ETHNICITY:
___ Hispanic **___ Not Hispanic**

EMPLOYMENT INFORMATION:

Applicant's Employer _____ Number of Years Employed _____

Employer's Address _____Phone _____

Co-applicant's Employer _____ Number of Years Employed _____

Employer's Address _____Phone _____

PROPERTY TO BE REHABILITATED

Property address (if different from mailing address): _____

Describe the repairs requested to be completed: _____

_____

_____

_____

_____

DEBT ON PROPERTY TO BE REHABBED:

Bank/Mortgage Company/Lien Holder	Term	Interest Rate	Current Balance	Monthly Payment
			$	$
			$	$
			$	$
			$	$
			$	$

MONTHLY INCOME:

Enter all income that household members have received for the past 30 days. Provide copies of recent check stubs or any benefit statement with this application.

Source of Income	Applicant	Co-Applicant	Other Household Member over 18 years of age	Other Household Member over 18 years of age
Employment	$	$	$	$
Social Security	$	$	$	$
Military/Veterans Benefits	$	$	$	$
Retirement or Pension Plan	$	$	$	$
Unemployment Benefits	$	$	$	$
Worker's Compensation	$	$	$	$
Child Support/Alimony	$	$	$	$
SSI/Supplemental Security	$	$	$	$
Interest/Dividends Income	$	$	$	$
TANF/Temp. Assist. for Needy Families	$	$	$	$
Food Stamps	$	$	$	$
State Income Tax Refunds	$	$	$	$
Other	$	$	$	$

ASSETS:

Type	Balance	Type	Value
Checking Account	$	Stocks/Bonds	$
Savings Account	$	Real Estate	$
Other:	$	Other:	$

Please provide copies of statements verifying asset information listed above. If additional space is required please attach a separate page.

PERSONAL MONTHLY EXPENSES:

Mortgage Payment	$	Auto Operating Expenses	$
Property Insurance	$	Auto Insurance	$
Taxes	$	Life Insurance	$
Heat	$	Medical Insurance	$
Water/Sewer	$	Medical Expenses/Prescriptions	$
Electricity	$	Child Care	$
Cellular Phone	$	Food	$
Cable/Internet/Telephone	$	Other:	$

MONTHLY DEBT:

Company Name	**Type of Debt**	**Present Balance**	**Payment Amount**
	Auto Loan	**$**	**$**
	Credit Card	**$**	**$**
	Credit Card	**$**	**$**
	Credit Card	**$**	**$**
	Other	**$**	**$**
	Other	**$**	**$**

Have you applied for credit within the last 3 months? ___yes ___no
If yes, were you ___ approved ____ denied

APPLICANT'S CERTIFICATION AND AUTHORIZATION TO RELEASE INFORMATION:

I/we understand that all information in this application is given for the purpose of evaluating eligibility for the City of Auburn's rehab program. I/we authorize the City of Auburn to obtain verification of all sources named to verify income and employment, and to obtain a credit report. I/we understand that by signing this application I/we authorize release of this information to the City of Auburn.

Client information will be shared with only those individuals, entities, or committee members designated or acknowledged by the City as an interested party to the client's application process excluding information declared as public records pursuant to M.R.S.A. Title 1 §401, Public Records and Proceedings. Otherwise, the information furnished will be held in strict confidence.

I/we hereby certify the information contained in this application is accurate and complete to the best of my/our knowledge and belief. I/we have not intentionally falsified any of this information or omitted information.

_____ _____ _____

Date Applicant's Signature Co-Applicant's Signature

SUPPLEMENTARY DOCUMENT FOR MULT-FAMILY REHAB APPLICATION

TENANT INFORMATION

Unit # _____ Tenant's Name _____# Bedrooms_____ Rent $_____

Unit # _____ Tenant's Name _____# Bedrooms _____Rent $ _____

Unit # _____ Tenant's Name _____# Bedrooms _____Rent $ _____

Unit # _____ Tenant's Name _____# Bedrooms _____Rent $ _____

Unit # _____ Tenant's Name _____# Bedrooms _____Rent $ _____

Unit # _____ Tenant's Name _____# Bedrooms _____Rent $ _____

Unit # _____ Tenant's Name _____# Bedrooms _____Rent $ _____

(Attach list of additional tenants on separate sheet)

_____

ANNUAL RENTAL OPERATING EXPENSES

Mortgage Payment	$	Trash Removal	$
Taxes	$	Repairs	$
Property Insurance	$	Grounds Maintenance	$
Advertising/Marketing	$	Snow Removal	$
Management	$	Janitorial and Supplies	$
Heat	$	Exterminating	$
Electricity	$	Other	$
Water/Sewer	$	Other	$

Other Costs (please provide description and cost)_____

_____

_____

The Green and Healthy Homes Initiative

What is a Green and Healthy Home?

Dry • Clean • Contaminant-free • Pest-free • Safe • Energy efficient • Well-maintained • Well-ventilated.

Green and Healthy Homes are those designed and maintained to foster health and safety as well as reduce water, energy usage and consumption.

The Health of our Community

In the past ten years 678 children have been poisoned by Lead in Lewiston and Auburn.

431 patients re-visit the Emergency Room because of asthma in 2012 at Central Maine Medical Center

What is the Green and Healthy Home Initiative (GHHI) Model?

- Integrated health, safety, lead hazard reduction, energy efficiency, and weatherization household interventions.
- Each house receives a thorough assessment and intervention so it will ultimately qualify as a green and healthy home.
- Stabilize individual homes and strengthen communities by allowing residents to remain in properties that they would otherwise have to vacate due to hazards in the home and escalating energy consumption costs.

A Network Housing Approach

Different organizations around our community are concerned with the link between unhealthy housing and unhealthy children and communities and are making efforts to improve our housing stock through various programs. However, these programs are not currently connected through a network where they can share insights, methodology, and data. GHHI can provide this network approach to healthy housing.

Senator Susan Collins | Senator Angus King
Auburn Housing Authority
The Breathe Easy Coalition
Androscoggin Head Start and Child Care
The Visible Community – "We believe in downtown."
Central Maine Healthcare – The Central Maine Medical Family
Healthy Androscoggin – Promoting Good Health
HomeQuest – An Affiliate of Community Concepts
NeighborWorks® Ownership Center
City of Auburn, Maine – Office of the City Manager
City of Lewiston
Maine Center for Disease Control and Prevention – An Office of the Department of Health and Human Services
CommunityConcepts
SeniorsPlus
Bates
St. Mary's Health System

Unhealthy homes are the source of

250,000 new cases of childhood lead poisoning,

1.9 million asthma related emergency room visits,

15,000 cases of carbon monoxide poisoning,

and 27 million preventable home related injuries every

Vital Statistics

- In certain areas of Lewiston and Auburn half of residents live below the federal poverty line, which is $11,670 annual income for an individual or $23,850 for a family of four.
- One third of tenants currently pay more than 20% of their income on rent.
- As many as one in four residents are unemployed .
- 77% of Lewiston and Auburn buildings were built before 1980. Our aging housing stock leaves houses that have structural decay, outdated heating systems, lack of insulation and weatherization, and accessibility issues such as steep stairs and narrow doorways.
- Nationally, low-income households spend 21% of their income on energy costs compared to 9% for other households,
- Nationally, 40% of asthma episodes are caused by triggers in the home. Some include mold, cockroaches, tobacco smoke and chemical odors.

Green & Healthy Homes Initiative™
Breaking the link between unhealthy housing & unhealthy children

GHHI Creates Efficient Positive Change

The Green and Healthy Homes Initiative is not a new program, but rather a system to make what is already being done more efficient.

The GHHI model is successful because of its integrated framework, which fosters collaboration among partners across multiple sectors. This cooperation includes addressing issues, and sharing data collection and outcomes.

Through a cost effective integrated intervention strategy, we can create homes that will yield better health, social, and economic outcomes for occupants and their children. The alliance formed around this effort creates efficiencies which save both time and money to all parties involved.

Other benefits

GHHI maximizes public and philanthropic investments for major benefits:

- Government innovation in service delivery
- Development of sustainable community-based "green collar" jobs and social enterprise
- Creation of stable and sustainable green and healthy homes in low and moderate income neighborhoods.
- Measurable improvements in health outcomes for children, seniors, and families
- Wealth retention and improved property values

We need you!

Become part of the movement/revolution in housing! To make this collaboration work we need you! Community members, policy makers, and stakeholders are all necessary for positive change.

- Break the current link between unhealthy housing and unhealthy children and communities.
- Develop healthy and sustainable green homes create green jobs.
- Improve health and economic outcomes for generations to come

To get involved contact Steven Johndro at Healthy Androscoggin:
johndrst@cmhc.org, (207) 795-5927
For more information, go to: www.ghhi.org

Stay Safe From Lead

What is Lead?

Lead is a poisonous metal. If your house or apartment was built before 1978 it may contain lead paint.

How can The Green and Healthy Homes Initiative Help?

- Help you find problems in your home
- Help you find money to fix your house

Green & Healthy Homes Initiative

Why is lead bad for you?

- There is no safe amount of lead in your body.
- It can make you sick.
- It can hurt your child's brain and other organs permanently.

Where is lead found?

- In lead paint, even underneath new paint
- It can be silver dust in your home
- In the soil in your yard near your house or apartment

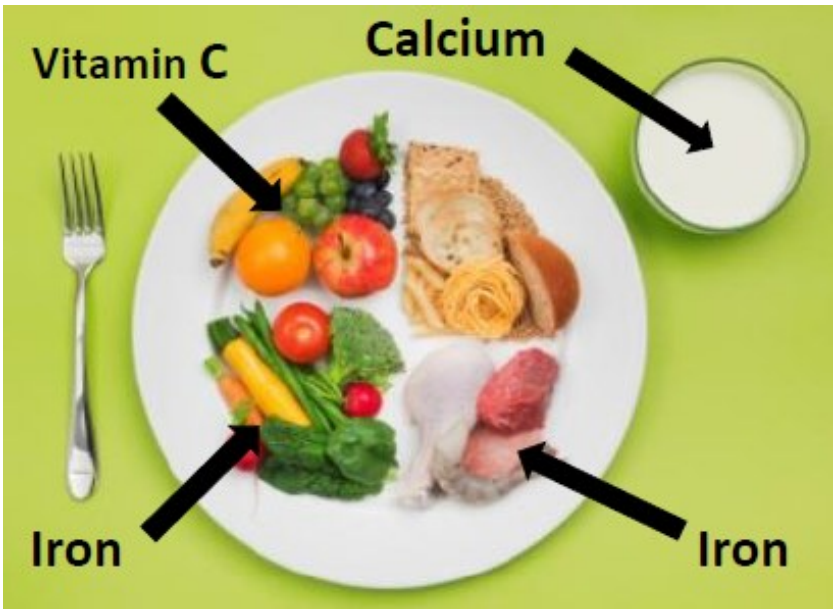
Keep your home clean

- Wash your hands with soap and water before eating, after children play, and before they go to bed.
- Get rid of old paint chips.
- Keep the house clean.
- Instead of sweeping, use a HEPA-vacuum.
- Dust with a wet cloth and then throw the cloth away.

More Information

Eat good food to stay safe

- Eat foods with Iron: Meat, fish, nuts, beans, and green vegetables
- Calcium: Milk, cheese, and yogurt
- Vitamin C: Oranges, potatoes, tomatoes, and broccoli



Ask your doctor

- Ask your doctor to test your family for lead.
- Children under 6 should be tested once a year
- Recent immigrants ages 1-16 should be tested

Who can you ask for help to keep safe from lead?

- Your landlord
- Lewiston Code Enforcement: (207) 513-3125
- Auburn Code Enforcement: (207) 333 -6600
- The Neighborhood Housing League: (207) 240-8201
- Pine Tree Legal Assistance: (207) 784-1558
- Maine CDC: (866) 292-3474
- Healthy Androscoggin : Lewiston and Auburn: (207) 795-5990

Healthy Androscoggin

Client #:

Green & Healthy Homes Initiative® Lewiston Auburn

GHHI Lewiston Auburn Pilot Project

Energy & Weatherization Behavior Survey Questions

Date of Survey: _____

Resident Educator: _____

Property Address: _____

---------- SECTION A. THE TEMPERATURE OF YOUR HOME ----------

To begin this survey we would like to ask you a few questions about the temperature of your home

A-1) **Does your home have a thermostat that controls the heating and/or cooling in your home?**
[if yes ask A-2]
Heating only ..... ☐
Cooling only ..... ☐
Heating and cooling ..... ☐
Don't know/not sure ..... ☐

A-2) **During an average day, about how many times do you adjust the thermostat in your home?**
6 or more times..... ☐
4 or 5 times ..... ☐
2 or 3 times ..... ☐
1 time ..... ☐
Not at all..... ☐
Don't know/not sure..... ☐
Please Explain [how often/why]

_____

_____

A-3) **At what temperature does your household usually keep your home in the winter?**

_____

[*if participant has trouble try asking for a best guess*]

A-4**) At what temperature does your household usually keep your home in the summer?**

_____

[if participant has trouble try asking for a best guess]

A-5) **Do you use kerosene heaters in your home?**
Yes..... ☐
No ..... ☐
Don't know/not sure ..... ☐

A-6) **If yes, where are they vented to?**
Inside..... ☐
Outside..... ☐
Don't know/not sure ..... ☐

A-7) **Have you used an oven to heat your home in the past year?**
Yes..... ☐
No ..... ☐
Don't know/not sure ..... ☐

A-8) **Which of the following statements best describes the indoor temperature of your home during the winter:** *[If answer is anything other than comfortable continue to question A-9]*
Much too cold ..... ☐
Too Cold ..... ☐
Comfortable ..... ☐
Too Hot ..... ☐
Much too hot ..... ☐
Don't know/not sure ..... ☐

A-9) **What prevented you from keeping your home at the temperature you preferred during the winter?**

Heating system problem ☐
Landlord controls the temperature ☐
Difference of opinion in household ☐
High cost of electricity/fuel ☐
Construction problem, such as broken Windows or holes in walls/roof ☐
Doors or windows do not close completely ☐
Don't know/not sure ☐

A-10) **How do you cool your home in the summer?** *[check all that apply]*

By opening windows
Ceiling fans ☐
Portable fans ☐
Central air conditioning ☐
Air conditioning from window units ☐
Air conditioning from wall units ☐
Other _____
Don't know/not sure ☐

A-11) **If window/wall units are used for AC, how many window/wall units are in the home?** _____

A-12) **Which of the following statements best describes the indoor temperature of your home during the summer:** *[if answer is anything but comfortable go to question A-13]*

Much too cold ☐
Too Cold ☐
Comfortable ☐
Too Hot ☐
Much to hot ☐
Don't know/not sure ☐

A-13) **What prevented you from keeping your home at the temperature you preferred during the summer?**

Cooling system problem ☐
Landlord controls the temperature ☐
Difference of opinion in household ☐
High cost of electricity ☐
Construction problem, such as broken windows or holes in walls/roof ☐
Doors or windows do not close completely ☐
Don't know/not sure ☐

A-14) **Is your home stuffy?** *[If yes go to A-15]*

Yes ☐
No ☐
Don't know/not sure ☐

A-15) **When during the past year did your home feel stuffy?**

Winter ☐
Spring ☐
Summer ☐
Fall ☐
Don't know/not sure ☐

A-16) **Is your home drafty?**

Yes ☐
No ☐
Don't know/not sure ☐

A-17) **When during the past year did your home feel drafty?**

Winter ☐
Spring ☐
Summer ☐
Fall ☐
Don't know/not sure ☐

A-18) **During the past six months, has anyone in your household adjusted the temperature of your hot water heater?**

Yes ☐
No ☐
Don't know/not sure ☐

A-19) **Over the past six months, has your family felt the need to cut out other expenses to pay utility bills?** *[If yes go to A-20 and A-21]*

Yes ☐
No ☐
Don't know/not sure ☐

A-20) **Which expenses have you cut?**

Prescription Medicines ☐
Mortgage or Rent Payment ☐
Purchase of Food ☐
Don't know/not sure ☐

A-21) **Over the past six months, how frequently has your household had to delay payments or purchases to pay utility bills?**

6 or more times ☐
4 or 5 times ☐
2 or 3 times ☐
1 time ☐
Not at all ☐
Don't know/not sure ☐

A-22) **Please rate the chances of your household having to move during the next six months because of problems in paying the utility bills:**

Very high ☐
High ☐
Medium ☐
Low ☐
Very low ☐
No chance ☐
Don't know/not sure ☐

---------- **SECTION B. SOURCES OF MOISTURE IN THE HOME** ----------

B-1) **On average, how long do members of your household spend in the shower?**

Less than 5 minutes ☐
5 to 10 minutes ☐
10 to 15 minutes ☐
15 to 20 minutes ☐
More than 20 minutes ☐
Don't know/not sure ☐

B-2) **Does the bathroom have a ventilation fan that works?**

Yes ☐
No ☐
Don't know/not sure ☐

B-3) **How often do you or members of your household operate the fan while showering?**

Never ☐
Rarely ☐
Sometimes ☐
Most of the time ☐
All of the time ☐
Don't know/not sure ☐

B-4) **How long after showering do members of your household operate the fan?**

The fan is turned off right away when leaving the shower area ☐
The fan is left on for several minutes ☐
The fan is left on until the steam in the shower area is gone ☐
Don't know/not sure ☐

B-5) **If your bathroom does not have a ventilation fan that works, do you use a window or other form of natural ventilation to clear the steam from the shower?**

Yes ☐
No ☐
Don't know/not sure ☐

If yes, please explain:

_____

_____

_____

----------SECTION C. Lighting and Insulation ----------)

C-1) **How often do people in your household leave lights left on in rooms that are not occupied?**

Never ☐
Rarely ☐
Sometimes ☐
Most of the time ☐
All of the time ☐
Don't know/not sure ☐

C-2) **What kind of light bulbs does your household use?**

Incandescent ☐
Fluorescent ☐
LED ☐
Don't know/not sure ☐

C-3) **Do you close the drapes, curtains, shades, and/or blinds during the day to block out the sun during the summer?**

Never ☐
Rarely ☐
Sometimes ☐
Most of the time ☐
All of the time ☐
Don't know/not sure ☐

---------- Section D. APPLIANCES IN THE HOME ----------

D-1) **Do you own a clothes washing machine? NOTE: Do not include community clothes washers that are located in the basement or laundry room of your apartment building.**

Yes ☐
No ☐
Don't know/not sure ☐

D-2) **In an average week, how many loads of laundry are washed in your clothes washer?**

1 load or less each week ☐
2 to 4 loads each week ☐
5 to 9 loads each week ☐
10 to 15 loads each week ☐
More than 15 loads each week ☐
Don't know/not sure ☐

D-3) **What water temperature setting is usually used for the wash cycle of your clothes washer** (hot, warm, cold water)**?**

Hot ☐
Warm ☐
Cold ☐
Don't know/not sure ☐

D44) **What water temperature setting is usually used for the rinse cycle of your clothes washer** (hot, warm, or cold water)**?**

Hot ☐
Warm ☐
Cold ☐
Don't know/not sure ☐

D-5) **Do you use a clothes dryer in your home?**

[NOTE: Do not include community clothes dryers that are located in the basement or laundry room of your apartment building.]

Yes ☐
No ☐
Don't know/not sure ☐

D-6) **How big of a load does your household typically dry?**

Small ☐
Medium ☐
Large ☐
Full ☐
Don't know/not sure ☐

D-7) **Where does you clothes drier vent to?**

Indoors ☐
Outdoors ☐
The dryer is ventless ☐
Don't know/not sure ☐

D-8) **Do you clean your clothes dryer's lint filter after every use?**

Yes ☐
No ☐
Dryer has no lint filter ☐
Don't know/not sure ☐

D-9) **How frequently does your household hang clothes to dry?**

Never ☐
Rarely ☐
Sometimes ☐
Most of the time ☐
All of the time ☐
Don't know/not sure ☐

D-10) **Where do you hang your clothes to dry?**

Indoors ☐
Outside ☐
Sometimes indoors, sometimes outside ☐
I don't hang my clothes to dry ☐
Don't know/not sure ☐

Please explain where clothes are hung to dry [kitchen, basement, backyard?]

_____

_____

_____

D-11) **Do you unplug any appliances like TV's, VCRs, stereos, radios, clocks, or computers to save energy when they are turned off?**

Yes ☐
No ☐
Don't know/not sure ☐

NOTES/COMMENTS_____

_____

_____

_____

_____

_____

This instrument was developed by GHHI Providence, adapted by GHHI Lewiston Auburn, and draws from the Oak Ridge National Laboratory National Evaluation of the Weatherization Assistance Program, 2006 Program Year, Appendix I: Occupant Survey

Healthy Androscoggin

Client #:

Green & Healthy Homes Initiative® Lewiston Auburn

GHHI Lewiston Auburn Pilot Project

Health & Safety Behavior Survey Questions

Date of Survey: _____

Resident Educator: _____

Property Address: _____

---------- SECTION A. SMOKING BEHAVIOR ----------

To begin this survey we would like to ask you a few questions about smoking behavior in your home

A-1) **How many members of this household smoke?**

Nobody in the household smokes ☐
1 person smokes ☐
2 people smoke ☐
3 people smoke ☐
4 or more people smoke ☐
Don't know/not sure ☐

A-2) **How many regular visitors to the household [boyfriend/grandparent/etc.] smoke?**

Nobody ☐
1 person smokes ☐
2 people smoke ☐
3 people smoke ☐
4 or more people smoke ☐
Don't know/not sure ☐

A-3**) Does anyone smoke inside of the home?**

Yes all of the time ☐
Yes, but not when children are home ☐
Sometimes ☐
Never inside of the house ☐
Don't know/not sure ☐

A-4) **Does anyone who lives in this home smoke inside of the car?**

Yes, all of the time ☐
Yes, but with the windows down ☐
Some of the time ☐
Never inside of the car ☐
Don't know/not sure ☐

A-5) **Open Comments [explain the smoking practices within the home]:**

_____

_____

---------- SECTION B. AIR QUALITY IN THE HOME ----------

B-1) **How often did your household use the following devices in the past three months?**

a) **An air filtering/purifying device**

Never ☐
Less than once a month ☐
Once per month ☐
Twice per month ☐
Once per week ☐
On most days ☐
Don't know/not sure ☐

b) **A dehumidifier**

Never ☐
Less than once a month ☐
Once per month ☐
Twice per month ☐
Once per week ☐
On most days ☐
Don't know/not sure ☐

c) **An air freshener**

Never ☐
Less than once a month ☐
Once a Month ☐
Twice per month ☐
Once Per week ☐
On most days ☐
Don't know/not sure ☐

d) **Candles or incense**

Never ☐
Less than once a month ☐
Once a Month ☐
Twice per month ☐
Once Per week ☐
On most days ☐
Don't know/not sure ☐

B-2) **What products do you regularly use to clean your kitchen?**

_____

_____

_____

B-3) **What products do you regularly use to clean your bathroom?**

_____

_____

_____

B-7) **What other sprays, polishes or chemical cleaners do you regularly use to clean your home?**

_____

_____

_____

B-4) **During the past year have you had a problem with rodents or insects that required the use of pesticides or extermination services?** (If "No" skip to Section C)

Yes ☐
No ☐
Don't know/not sure ☐

B-5) **In the past year, how often did a professional exterminator use pesticides in the home?**

Never ☐
Once ☐
Twice ☐
Three or more times ☐
Don't know/not sure ☐

B-6) **In the past year, how often did you use pesticides in your home?**

Never ☐
Once ☐
Twice ☐
Three or more times ☐
Don't know/not sure ☐

B-7) **If sprays/bombs are used, do you leave your home during pesticide application?**

Yes ☐
No ☐
Don't know/not sure ☐

B-8) **What pesticides have you used?** [Prompts: rat or mice poison, bug poison or cockroach sprays/bombs, cockroach bait]

_____

_____

_____

---------- SECTION C. CLEANING YOUR HOME ----------

C-1) **During an average month, how many times do you do the following activities?**

a) **Sweep the floors?**

Never ☐
Less than once per month ☐
Once per month ☐
Twice per month ☐
Once per week ☐
On most days ☐
Don't know/not sure ☐

b) **Wet mop the floors?**

Never ☐
Less than once per month ☐
Once per month ☐
Twice per month ☐
Once per week ☐
On most days ☐
Don't know/not sure ☐

c) **Damp dust surfaces in your home?**

Never ☐
Less than once per month ☐
Once per month ☐
Twice per month ☐
Once per week ☐
On most days ☐
Don't know/not sure ☐

d) **Vacuum?**

Never ☐
Less than once per month ☐
Once per month ☐
Twice per month ☐
Once per week ☐
On most days ☐
I do not own a vacuum ☐
Don't know/not sure ☐

C-2) **Do you use a Hepa-Vacuum ?**

Yes ☐
No ☐
I do not own a Hepa-Vacuum ☐
Don't know/not sure ☐

C-3) **During an average month, how often do you do the following in <u>your child's room</u> ?**

a) **damp dust?**

Never ☐
Less than once per month ☐
Once per month ☐
Twice per month ☐
Once per week ☐
On most days ☐
Don't know/not sure ☐

b) **Mop the floor?**

Never ☐
Less than once per month ☐
Once per month ☐
Twice per month ☐
Once per week ☐
On most days ☐
Don't know/not sure ☐
N/A (no surface to mop) ☐

c) **Vacuum?**

Never ☐
Less than once per month ☐
Once per month ☐
Twice per month ☐
Once per week ☐
On most days ☐
Don't know/not sure ☐
N/A (no surface to vacuum) ☐

d) **Wash the throw rugs?**

Never ☐
Less than once per month ☐
Once per month ☐
Twice per month ☐
Once per week ☐
On most days ☐
Don't know/not sure ☐
N/A (no throw rugs) ☐

e) **Wash the stuffed animals?**

Never ☐
Less than once per month ☐
Once per month ☐
Twice per month ☐
Once per week ☐
On most days ☐
Don't know/not sure ☐
N/A (no stuffed animals) ☐

C-4) **During an average month, how often do you wash the linens in your home (bed sheets)?**

Never ☐
Less than once per month ☐
Once per month ☐
Twice per month ☐
Once per week ☐
On most days ☐
Don't know/not sure ☐

C-5) **What washing machine cycle is used to <u>wash</u> linens?**

Hot ☐
Warm ☐
Cold ☐
Don't know/not sure ☐

C-6) **What drying machine cycle is used to <u>dry</u> linens?**

Hot ☐
Warm ☐
Cold ☐
Don't know/not sure ☐

C-7) **During an average month, how often do you wash bed covers/comforters/blankets?**

Never ☐
Less than once per month ☐
Once per month ☐
Twice per month ☐
Once per week ☐
On most days ☐
Don't know/not sure ☐

C-8) **Do people to wear shoes when they are in your home?**

Yes ☐
No ☐
Don't know/not sure ☐

---------- SECTION D. PETS----------

D-1**) Does your household have indoor pets such as dogs, cats, hamsters, birds or other feathered or furry pets that are kept inside?**

Yes ☐
No ☐
Don't know/not sure ☐

D-2**) Is the pet allowed in bedrooms?**

Yes ☐
No ☐
Don't know/not sure ☐

---------- SECTION E. FIRE AND CO SAFETY----------

E-1) **Has your family developed a fire escape plan?**

Yes..... ☐
No ..... ☐
Don't know/not sure..... ☐

E-2) **During an average year, how often does your family test the smoke detector/s in the home?**

Once every 3 months..... ☐
Once every 6 months ..... ☐
Once every 12 months..... ☐
Never ..... ☐
Don't know/not sure..... ☐

E-3) **During an average year, how often does your family test the Carbon Monoxide detector/s in the home?**

Once every 3 months..... ☐
Once every 6 months ..... ☐
Once every 12 months..... ☐
Never ..... ☐
Don't know/not sure ..... ☐

NOTES/COMMENTS_____

This instrument was developed by GHHI Providence, adapted by GHHI Lewiston Auburn, and draws from the following sources:

- National Center for Environmental Health at CDC, National Asthma Survey, National Sample, 2003
- The American Academy of Pediatrics Children's Health Survey for Asthma (intake, midterm, and final assessment tools)
- Coalition to End Childhood Lead Poisoning
- National Center for Healthy Housing's Pediatric Environmental Home Assessment Survey
- Community Environmental Health Resources Center
- The Maryland Weatherization Assistance Program

Healthy Androscoggin

Green & Healthy Homes Initiative® Lewiston Auburn

Client #:

GHHI Lewiston Auburn Pilot Project

Health & Safety Pre-Survey

Date of Survey: _____

Resident Educator: _____

Property Address:_____

---------- SECTION A. CONSENT TO OBTAIN HEALTH INFORMATION ----------

Before beginning this survey, review consent forms with client and obtain consent in writing.

If there is a positive response to a history of asthma, lead poisoning or household falls/injuries, then consent to access medical cost data must be obtained in writing. See Section E at end of this survey.

A1) Was informed consent form signed to ask about family medical history? ☐Yes ☐No

A2) Number of adults living in the home: _____

A3) Number of children living in the home: _____

A4) Ages of children living in the home: _____

---------- SECTION B. ASTHMA HISTORY ----------

B1) Do any household occupants, of any age, have asthma? ☐Yes ☐No

B2) If YES, how many? _____
If NO, skip to Section C

B3) Do any children under the age of 18 have asthma? ☐Yes ☐No
B4) If YES, how many children have asthma? _____
If NO, skip to Section C

B5) Answer questions B6- B33 for up to 3 children with asthma. If no children have asthma, skip to Section C *Lead Poisoning*. OR, if family cares to provide information about other respiratory illnesses, go to B34.

CHILD 1 – Asthma History

B6) Child 1 Age: _____

B7) How would you rate the child's asthma during the past 12 months?
☐Out of control ☐Poorly controlled ☐Somewhat controlled
☐Well controlled ☐ I don't know

B8) Number of nights in the past month that child was up in the middle of the night as a result of asthma symptoms (wheezing, coughing, shortness of breath): _____

B9) Number of missed days of school/daycare in the past 12 months due to asthma: _____

B10) Number of times in the past month that child has used the rescue inhaler or nebulizer (if one has been prescribed): _____

B11) Number of urgent care/clinic visits for asthma in the past 12 months: _____
B12) Number of asthma-related hospitalizations in the past 12 months (not just ER visits): _____
B13) Number of ER visits for asthma in the past 12 months: _____

CHILD 2 – Asthma History

(skip to question B30 if not more than 1 child has asthma)

B14) Child 2 Age: _____

B15) How would you rate the child's asthma during the past 12 months?
☐Out of control ☐Poorly controlled ☐Somewhat controlled
☐Well controlled ☐ I don't know

B16) Number of nights in the past month that child was up in the middle of the night as a result of asthma symptoms (wheezing, coughing, shortness of breath): _____

B17) Number of missed days of school/daycare in the past 12 months due to asthma: _____

B18) Number of times in the past month that child has used the rescue inhaler or nebulizer (if one has been prescribed): _____

B19) Number of urgent care/clinic visits for asthma in the past 12 months: _____
B20) Number of asthma-related hospitalizations in the past 12 months (not just ER visits): _____
B21) Number of ER visits for asthma in the past 12 months: _____

CHILD 3 – Asthma History

(skip to question B30 if not more than 1 child has asthma)

B22) Child 3 Age: _____

B23) How would you rate the child's asthma during the past 12 months?

☐Out of control ☐Poorly controlled ☐Somewhat controlled
☐Well controlled ☐ I don't know

B24) Number of nights in the past month that child was up in the middle of the night as a result of asthma symptoms (wheezing, coughing, shortness of breath): _____

B25) Number of missed days of school/daycare in the past 12 months due to asthma: _____

B26) Number of times in the past month that child has used the rescue inhaler or nebulizer (if one has been prescribed): _____

B27) Number of urgent care/clinic visits for asthma in the past 12 months: _____
B28) Number of asthma-related hospitalizations in the past 12 months (not just ER visits): _____
B29) Number of ER visits for asthma in the past 12 months: _____

If the respondent answered YES to any prior questions about children with asthma in the home, complete B30-B33 and obtain consent for cost data in writing (Section E)

B30) Number of total days of work missed by adult/s in household in the past 12 months as a result of child/children's asthma: _____

B31) Dollar amount spent on asthma urgent care/ER visits/hospitalizations in the past 12 months: $_____

Confirm this dollar amount against medical bills, if available from family. If not available, then speak about the need for approval for GHHI to obtain cost data from the managed care organization/ insurance provider.

B32) Who paid the health system cost for asthma ER visits/hospitalizations?

☐Medicaid ☐Medicare ☐Private Insurance
☐Hospital ☐Self

B33) Please provide the name of the Insurance Carrier: _____

B34) Other, non-asthma, respiratory illnesses among household members:

---------- SECTION C. LEAD POISONING HISTORY ----------

C1) Is there a pregnant woman living in this household? ☐Yes ☐No

C2) Has anyone currently or previously living in this house been lead poisoned? ☐ Yes ☐No

If YES, continue with Section C and obtain consent for cost data in writing (Section E).
If NO, skip to Section D Falls/Injuries

C3) How many current occupants have been lead poisoned while living at this property?

C4) **INSTRUCTION**: Answer questions C5-C29 for up to 3 occupants who have been lead poisoned while residing at this property. If none have occurred, skip to Section D *Falls/Injuries*

C5) Age of occupant 1 when lead poisoning occurred: _____

C6) Occupant 1, Lead test date 1: __/__/____ C7) Occupant 1, Blood Lead Level 1: _____

C8) Occupant 1, Lead test date 2: __/__/____ C9) Occupant 1, Blood Lead Level 2: _____

C10) Occupant 1, Lead test date 3: __/__/____ C11) Occupant 1, Blood Lead Level 3: _____

C12) Age of occupant 2 when lead poisoning occurred: ____

C13) Occupant 2, Lead test date 1: __/__/____ C14) Occupant 2, Blood Lead Level 1: _____

C15) Occupant 2, Lead test date 2: __/__/____ C16) Occupant 2, Blood Lead Level 2: _____

C17) Occupant 2, Lead test date 3: __/__/____ C18) Occupant 2, Blood Lead Level 3: _____

C19) Age of occupant 3 when lead poisoning occurred: ____

C20) Occupant 3, Lead test date 1: __/__/____ C21) Occupant 3, Blood Lead Level 1: _____

C22) Occupant 3, Lead test date 2: __/__/____ C23) Occupant 3, Blood Lead Level 2: _____

C24) Occupant 3, Lead test date 3: __/__/____ C25) Occupant 3, Blood Lead Level 3: _____

C26) Dollar amount spent on health costs related to lead poisoning in the past 12 months: $_____

Confirm this dollar amount against medical bills, if available from family. If not available, then speak about the need for approval for GHHI to obtain cost data from the managed care organization/ insurance provider.

C27) Who paid the health system cost for treatment of lead poisoning?

☐Medicaid ☐Medicare ☐Private Insurance
☐Hospital ☐Self

C28) Please provide the name of the Insurance Carrier: _____

C29) Use this space for additional screening dates/data of those already identified above or if more than 3 occupants have a history of lead poisoning at this property.

---------- SECTION D. FALLS/INJURIES HISTORY----------

D1) Have any household occupants experienced household falls/injuries in the past 12 months?

☐Yes ☐No

If YES, complete Section D and obtain consent for cost data in writing (Section E). If NO, skip to Section E.

D2) How many occupants experienced household falls/injuries in the past 12 months? _____

D3) Number of incidents of household falls/injuries in the past 12 months: _____

D4) Please describe the nature of the incidents/injuries (to whom, type of injury, how sustained). Use more space at end of survey as needed.

Incident 1: _____

Incident 2 (etc.): _____

D5) Number of urgent care/clinic visits for household falls/injuries in the past 12 months: _____

D6) Number of ER visits for household falls/injuries in the past 12 months: _____

D7) Number of hospitalizations (not just ER visits) for falls/injuries in the past 12 months: _____

D8) Number of missed days of school/daycare in past 12 months due to household injuries: _____

D9) Number of days of missed work in past 12 months due to household injuries (for adult care of self or household dependent): _____

D10) Dollar amount spent on falls/injuries in the past 12 months: $_____

Confirm this dollar amount against medical bills, if available from family. If not available, then speak about the need for approval for GHHI to obtain cost data from the managed care organization/ insurance provider.

D11) Who paid the health system cost for falls/injuries?

☐Medicaid ☐Medicare ☐Private Insurance
☐Hospital ☐Self

D12) Please provide the name of the Insurance Carrier: _____

---------- SECTION E. CONSENT TO OBTAIN MEDICAL COST HISTORY----------

If there was a positive response to questions B-1; C-2; or D-1 (History of asthma, lead poisoning or household falls or injuries), then consent to access medical cost data must be obtained in writing.

E1) Was consent obtained to access medical cost data for asthma, lead poisoning treatment or household falls/injuries from managed care organization, insurer or medical office? ☐Yes ☐No

---------- INTERVIEWER COMMENTS/NOTES----------

***************************THANK YOU FOR PARTICIPATING***************************